

**Listing of the Claims**

1. (Currently Amended) X-ray detector (10) with detector elements (1, 11) arranged in a layer, wherein every detector element (1, 11) comprises a sensor unit (5) and a processing circuit (4) coupled thereto, and wherein a shielding (3, 13) of variable shielding effectiveness is disposed in front of the processing circuit (4).
2. (Currently Amended) X-ray detector (10) according to claim 1, characterized in that wherein the shielding (3, 13) has a variable effective thickness (d1, d2).
3. (Currently Amended) X-ray detector according to claim 1, characterized in that wherein a scintillator unit (2, 12) is disposed in front of each sensor unit (5).
4. (Currently Amended) X-ray detector according to claim 3, characterized in that wherein the scintillator unit (2, 12) and the shielding (3, 13) are arranged in a gapless way in a common layer.
5. (Currently Amended) X-ray detector according to claim 2, characterized in that wherein the shielding is formed as a section (3, 13).
6. (Currently Amended) X-ray detector according to claim 5, characterized in that wherein the section ~~consists of~~ comprises a spatially shaped strip (3).
7. (Currently Amended) X-ray detector according to claim 5, characterized in that wherein the section (3) is L-shaped.
8. (Currently Amended) X-ray detector according to claim 5, characterized in that wherein the section (13) is trapezoidal or triangular.
9. (Currently Amended) X-ray detector according to claim 1, characterized in that wherein material of the shielding (3, 13) contains at least one of the following substances: Pb, W, Mo, Ta, Ti, BaSO<sub>4</sub>, BaCO<sub>3</sub>, BaO, PbCO<sub>3</sub>, PbCl<sub>2</sub>, PbSO<sub>4</sub>, TiO<sub>2</sub> and/or ZnO.

10. (Currently Amended) X-ray detector according to claim 9, ~~characterized in that~~  
wherein said material is embedded in a carrier, preferably an epoxy-resin carrier.
11. (Currently Amended) X-ray detector according to claim 1, ~~characterized in that~~  
wherein the sensor units (5) and the processing circuits (4) are arranged in a common layer.
12. (Currently Amended) X-ray detector (10) with detector elements (1, 11) arranged in a layer, ~~preferably X-ray detector according to claim 1~~, comprising a layer of scintillator units (2, 12) disposed in front of a layer of sensor units (5), the scintillator units (2, 12) being separated from each other by a shielding (3, 13) that has a high shielding effectiveness with respect to X-rays and a high reflectivity with respect to photons produced in the scintillator units (2, 12).